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## Scientific American.

## MISCELLANEOUS.

Arkansas

From a recent travel in Arkansas, I am convinced that she possesses within her bosom the elements of a great empire. History presents no parallel to the advantages she now holds out to emigrants, in the way of getting rich lands, &c. Much the largest portion of the State is unsurpassed in the fertility of its soil and the extent of its agricultural resources; and the southern and eastern portions are now held to be the finest cotton lands on the globe. As a field for science, an opening for speculation, and capital, her claims are transcendant. Here, from her silver-crested hills and azure-robed mountains, science may pluck the gems. Here the hand of capital may be stretched forth to embrace rich and exhaustless mines of iron, coal, lead, marble, and other useful stones. To reap rich rewards, bring to light her vast wealth, develope her great resources, and make them available, her people hitherto apathetic, have now resolved to build a grand trunk railroad through the heart of the State, connecting the capital -Little Rock-with the Mississippi River, at Memphis, from which point railroads and rivers radiate in all directions. The country through which this road will pass is exceedingly fertile, and presents great facilities for cheap construction, requiring comparatively no cutting, being rich plains, prairies, and alluvial bottoms, crossing two or three beautiful and navigable, though small, streams, which can be easily bridged.

In crossing an extensive bottom, requiring an embankment, if alternate sections were made of wood-such as one hundred yards of a strong timber frame, and then fifty yards of earth,-a great improvement in railroad construction would be effected; this system would prevent vibration, and would also effect a great saving.

In a few years Arkansas will attain to be a State, great in her products, powerful in her influence, and confident in her powers. R

Memphis, Tenn.

## Railroad Accidents.

We cannot indulge in vituperous language towards conductors and engineers as some papers do, every time an accident takes place on a railroad. If we are to believe one paper all the accidents are caused by ignorant conductors-men below mediocrity in talent and education. Another paper strains to make the public believe that the majority of accidents are occasioned by intemperate engineers or inferior ones; the employees, at any rate, get all the blame for the accidents, the companies only get blame for not paying high enough wages so as to secure able men for conductors and engineers. We know that such conclusions and opinions are incorrect. and those who entertain them are ignorant of what they are talking about. We know that there are conductors and engineers employed on our railroads who are perfectly competent to fulfill all their duties ; men who are highly educated and endowed with qualities of mind of the highest order. We do not wish to mention names, but we could easily do so.

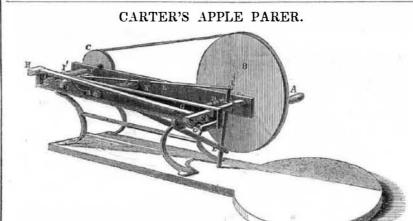
It is a great wonder to us that there are not every part of their surface. The skins are aled is sufficient for twenty cows, oxen or hortreated in Japan, are said to be fitting out an more railroad accidents, for when we consider lowed to remain in the mixture until the hair ses' hides, and for a hundred sheep, calf, or expedition to punish those Asiatics; this how our tracks are all open, so many of them starts at every part, when it is removed with other skins. single, so many poor bridges, and beside all shows a zeal for something more than a huknives, and the skins are then worked out in THE GRAIN .- The grain must be laid with mane principle, or why is our citizens at home this, many of our railroads were built with clear water, as is ordinarily practiced by tanweak liquor of the kind last described .- [Lonallowed to be killed so recklessly by such tercurves and laid with rail for engines one-half ners. don Mechanics' Magazine. rible explosions as that of the Redstone. lighter than those now used, and to run at SHEEP SKINS .- To remove the wool from one-half the present general speed, we say the sheep skins, the patentee applies, with a white Another Terrible Steamboat. conductors and engineers (taking the mass) An experiment was made in New Orleans washing brush to the flesh-side, some of the The Cincinnati Gazette of the 5th inst. deserve great credit for their vigilance and a few days since by a druggist, with one of above solution. In about two hours the sogives the account of one of the most terriffic the narcotics so much used in the East-viz: ability. Our railroad system is bad, and lution will have caused the wool to start, steamboat explosions which has ever taken neither the conductors nor engineers should Indian Hemp, or canabris indica, in order to when it is removed with knives, and the skins place. The steamboat Redstone lately combe blamed for this. When an accident occurs test its application to medicinal purposes. are then well worked out, as customary. menced running between Cincinnati and Mawe want a strict investigation of it, and a He took six grains, (a very large dose) which This process effects a considerable saving of dison, and on Saturday at 12 M. left the latprompt punishment for the guilty; but no produced great weight about the head, followtime over the system of limes at present adopter place for Cincinnati on a trial of speed man nor body of men should be condemned ed by irresistable bursts of laughter, during ted in the trade. with about twenty cabin passengers. The unheard. which, however, he was perfectly conscious THE BAIT .- Instead of using hens and pi- number on deck is not known. The officers of all that he was doing, or felt or thought. geons' dung, the patentee makes the bait by Steamboat Explosions. and crew numbered about twenty persons The steamer Glencoe exploded her boilers mixing with water a sufficient quantity of sul- She landed at Carrolton and took on a num-Error. The residence of George O.Donnell was at St. Louis on the 3rd inst. She had 150 phuric acid to give it a perceptibly acid taste, ber of passengers, and then pushed out and given in our list of claims for March 2nd at passengers; a great number were killed. She The skins are immersed in this liquor, and started on. Upon arriving at Scott's Landing, New London, N. Y. It should have been had just arrived from New Orleans. will generally run down in an hour or two, four miles above Carrolton, at the foot of The steamer Redstone exploded all her boibut if they should not run down fast enough. Craig's Bar, she was called in for a passenger, New Lebanon, N.Y.

lers on the same day as the Glencoe, while some very excellent kinds, of a mixed qualicatastrophies? See on another column.

American Cotton.

N.S. Dodge, Secretary of the U.S. Commission at the World's Fair, has published an article in the Washington Intelligencer about the Cottons that were exhibited in the Crystal Palace. There were samples from Asia, Africa, and the United States. Among the specimens of the East India Co., there were cotton.

backing out of Scott's Landing near Madison | ty, but all exhibited carelessness in prepara-Ohio. A great number were killed; 15 dead tion, gathering, &c. There was a good sambodies have been recovered. When will our ple from Peru, and some good qualities from country be aroused to the iniquity of such Barbadoes and Jamaica. The African cottons were good, but not well prepared. For many purposes, he believes, it will meet with ready sale, as the quality is very good, and it is totally different from the cotton raised in our country. The soil, he thinks, is the cause of the difference in the quality of the cotton, and no soil in any cotton growing country is equal to that of the South, for raising fine long silky



The accompanying engraving is a perspec- its inside face, which fits into the groove of tive view of the Apple Paring Machine of the screw, D, therefore, as the bar, E, is in-Charles P. Carter-formerly of Ware, Mass., serted between two cheeks of the bolt, R, the but now of No. 18 Maiden Lane, this city N. Y., for which a patent was granted in Oc- | belt to the left side, thus turning the rack, G' tober 1849. The machinery is placed on a and operating the knife, H. When the knife bottom board or plate. A is a crank handle; has gone over the apple, the screw throws B is a pulley driven by the handle; C is a out the pin and the rack bolt R, springs back smaller pulley driven by a band from B; I' is at once to commence a new operation. To a spindle, on the end, I, of which are the bring back the rack belt, it is attached prongs to hold the apple; H is the knife on to a flat arm, L, on the top, which has a spithe end of an arm, G. This arm is attached ral spring, K, on it, and another flat steel to a shoulder which has a segmental rack, G', spring, E', below. These springs and guide on it, and this shoulder is fixed on a pin which turns in bearings; R is a small rack on a square sliding bolt. This rack is moved side-ways, and by meshing into the segment, G', it sliding head operated by the spring arm, L, turns the knife arm, G, giving it a half revolution, to make the knife act on the apple as it revolves on the fork, I. The knife is also guided according to the round shape of the apple by a rest, S. The bolt of the rack is parer. More information may be obtained by moved by a screw, D, on the spindle of pulley letter addressed to Mr. Carter, or applying at B; E is an oscilating bar with a stub pin on the placementioned above.

**Recent Foreign Inventions.** IMPROVEMENT IN TANNING .- George Laycock, late of Albany, N. Y., dyer, now of Donpatent for the following improvements in ed. treating hides and skins :-

UNHAIRING SKINS OR HIDES .- The skins are first soaked in water and unfleshed, and broken up in the ordinary manner. The patentee then takes 7 lbs. of soda ash, pearlash potash, or any other strong alkali, and 6 lbs. of unslacked lime, and boils them in six gallons of water. He then adds to this mixture sufficient water to reduce the strength of the solution to 14° Twaddle's Alkali Hydrometer, and immerses the skins, handling them well at first, so as to expose to the solution

stub pin is guided by the screw to push the bar give the knife arm steadiness, and bring it back suddenly to its position atter every opewhich acts on a spring plate on the face of the said clearer, pushes it out when the apple is pared, throwing it off the prongs of the fork. This is a very simple and good apple

more acid must be added, and the skins are then to be well worked out in clean water The acid is subsequently neutralized with caster, Eng., tanner, has taken out an English stale urine, and the skins are again well wash-

> TANNING THE SKINS .- For this purpose the patentee takes, for 100 calf skins, 100 lbs. su mac, 50 lbs. terra japonica, 12½ lbs. sulphate ot potash, and 121 lbs. alum, which he boils for half an hour in sufficient water to cover the skins. He then macerates in cold water 40 lbs. oak bark, which he adds to the above mixture, and immerses the skins therein, handling them well at first, and continuing to do so until the skins are found to be tanned, which will generally be in about six or eight days. The quantity of liquor above mention-

the Rev. Perry A. Scott, a Baptist minister, formerly stationed in Covington, and recently in Warsaw, Ky. Mr. Scott had been on a visit to his parents, and was returning to his charge. His parents and three sisters accompanied him to the landing to witness the departure, as the sequel proved, into the presence of his God. The Redstone shoved out and backed down from the landing about one hundred yards. A strong wind was blowing in shore, and it was with difficulty that she could back her way out. At the second revolution she made to start forward, her three boilers exploded at the same time, with a tremendous noise, shattering and tearing the boat literally to atoms. She sunk in less than three minutes, in twenty feet water. The ladies' cabin and aft part of the boat, from the main-deck up, in its shattered condition, took fire and burned down to the water's edge. In the explosion her chimneys were blown nearly across the river.

The awful force of the explosion can be conceived from the fact that a large piece of one of the boilers was blown half a mile, lacking five or six yards, from the wreck. Eleven bodies were blown into a cornfield at some distance from the water. Among them, those of the first and third engineers.

The people of Carrolton and the vicinity hurried to the scene; and twenty-five dead and wouned bodies were immediately borne to a small farm-house on top of the hill which rises back of the river, and which was converted into a hospital. The inmates of this house gave up their rooms, bedding, and every thing in their possession to the suffering. The scene here beggars all description. The mangled and ghastly corpses by the side of the wounded and dying, with inadequate medical aid and means for the care of the latter, the floor of the rooms covered deep with blood; this, and the view of the scattered wreck and the awe-stricken multitude on the shore below, made up a scene of horror before which the intensest paintings of Sue and Dickens pale and grow dim.

The river for some distance below Carrolton was strewn with the fragments of the boat, machinery, furniture, and clothing .-Small pieces of bedding and clothing were tound at the distance of very nearly half a mile back from the river, while the trees along the shore were littered with the fragments of the same and of the wreck.

The cause of this explosion is very evident; it was recklessnes, that culpable public, and, let us say, legalized murderer. Almost every week we have to record some such calamity. Within three weeks, no less than 100 persons have lost their lives by steamboat explosions on the river between Cincinnati and New Orleans. All the laws which have been enacted, and all the safety-valves which have been invented have failed to reduce the number of explosions—there are just as many now as ever. We speak of these explosions frequently, our readers will see that we do it from principle, or we would not take up so much room in our columns with such a subject, but while our people are sent in scores into eternity every week by explosions, because they trust their lives to engineers and steamboat captains, we cannot hold our tongue -and will not. Our government in their zeal for the lives of some American sailors, cruelly